

REMARKS

This is in response to the Office Action that was mailed on September 26, 2005. Independent claims 1 and 3 are amended in accordance with the disclosure to expressly specify the disclosed fact that the “covering” element in the present invention is separate from the “container” element in the present invention. No new matter is introduced by this Amendment. Entry of this Amendment – in order to place the application into condition for allowance or into better condition for appeal – is respectfully solicited. Claims 1-8 are in pending the application.

THE PRESENT INVENTION. The battery of the present invention has a battery container with a covering which has been applied over the outer peripheral surface of the container. This separate covering consists essentially of an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1% or more. In accordance with the present invention, the battery container and the high polymer sheet are not laminated and united together. Therefore, if a nail pierces the battery, the covering – which consists essentially of the high polymer sheet and is not laminated onto the container – extends between the positive and negative electrodes through the battery container, in order to prevent a large current from instantly flowing between the electrodes.

Claims 1-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP 10-208708 (JP ‘708) in view of JP 2000-173564 (JP ‘564). The rejection is respectfully traversed.

JP ‘708 and JP ‘564 disclose batteries having a *container* made of laminated film. The laminated film of the prior art *container* is made of metal foil and A high polymer sheet with a tensile elongation percentage (TEP) of at least 1%. The object of the prior art is to prevent nails from piercing the battery container by using the laminated film that include a high polymer layer with a high TEP.

In contrast, the present invention covers the battery container with a *separate* high polymer sheet. Then if, for instance, a nail pierces the battery of the present invention, the nail

pushes the high polymer sheet to a position between the positive and negative electrodes of the battery container together with the nail, which avoids high current from instantly flowing between the electrodes.

OFFICE ACTION, PAGE 4. The Examiner indicated in the outstanding Office Action that “the instant claims no longer recite a ‘separate’ high polymer sheet”. Applicants believe that the separate recitations in the claims of battery containers on the one hand and of polymer sheet coverings on the other hand can only be construed as referring to separate elements. Nevertheless, in order to expedite prosecution, the present Amendment proposes to add back into the claims the express reference to a “separate” covering which had previously been recited therein. The Examiner goes on to say that “there appears to be no difference between the containers contemplated in the specification and the materials disclosed in” the cited art. The Examiner may be correct with respect to battery cell *containers*. However, the Examiner is respectfully reminded that the present invention requires both a “container” and a separate “covering”.

In JP ‘708 and JP ‘564, the high polymer sheets may constitute the outermost layer of the battery containers. However, the battery containers are made of laminated film containing both the metal foil and the high polymer sheet. In contrast, the battery of the present invention is characterized in that the outer peripheral surface of the batter container is covered with a *separate* ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1% or more. This double covering feature of the present invention is neither taught nor suggested by JP ‘708 or by JP ‘564, alone or in combination.

More specifically, in the case of JP ‘708 and JP ‘564, the high polymer sheet and the battery container are united to one another by sheet lamination. *The high polymer sheet therefore cannot stretch elastically*, so that it cannot be deformed between the two electrodes through the container. Manifestly, the batteries of JP ‘708 and JP ‘564 cannot achieve this beneficial effect provided by the present invention.

OFFICE ACTION, PAGES 4-5. In the sentence bridging pages 4-5 of the Office Action, the Examiner quotes what he refers to as paragraph [0039]. That paragraph was amended on May 14, 2004 to delete precisely the language quoted by the Examiner. However, again, the Examiner is respectfully reminded that the language in question refers to battery “container” 6, and not to battery “covering” 7. The Examiner is again respectfully referred to Figure 1 herein. “The lithium based battery of the present invention is characterized in that the outer peripheral surface of the battery container 6 is covered with the ion impermeable and extensible high polymer sheet 7 having a tensile elongation percentage of 1 % or more.” Specification, page 9, lines 5-9.

NO MOTIVATION FOR COMBINATION. On page 2 of the outstanding Office Action the Examiner has taken the position that the outer periphery of the cell structure in JP ‘708 is covered with an ion impermeable and extensible high polymer sheet. However, on page 3 of the Office Action, the Examiner argues that a person of ordinary skill in the art “would be motivated by the disclosure of JP ‘564 to use a highly elastic thin film as the outer layer of the bag of JP ‘708”. While there may be some logic to the theory that JP ‘564 motivates the use of an elastic thin film on the outer periphery of the *cell structure* in JP ‘708, no basis is seen for the Examiner’s argument that a person of ordinary skill in the art would be motivated to use an elastic thin film as the *outer layer* of the JP ‘708 bag.

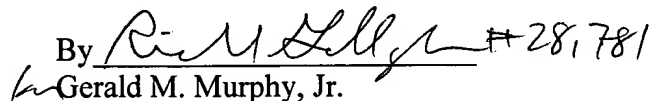
Applicants respectfully submit that the features of the invention reflected in the present claims would not be derived by persons of ordinary skill in the art from the disclosures of JP ‘708 and JP ‘564, individually or in combination. Accordingly, it is respectfully requested that the rejection of record be withdrawn.

For any questions, the Examiner is respectfully requested to telephone Richard Gallagher, Reg. No. 28,781, at (703) 205-8008.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

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Respectfully submitted,

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